

Title (en)
THERMOELECTRIC GENERATOR

Title (de)
THERMOELEKTRISCHER GENERATOR

Title (fr)
GÉNÉRATEUR THERMOÉLECTRIQUE

Publication
EP 3093895 A1 20161116 (EN)

Application
EP 16175967 A 20121226

Priority
• JP 2011283769 A 20111226
• JP 2012064637 W 20120607
• EP 12862448 A 20121226

Abstract (en)
This thermoelectric generator is arranged in an outdoor atmosphere whose temperature changes periodically in day and night so as to generate electricity by using the change of temperature of the outdoor atmosphere and is provided with a heat conducting body (1) which can exchange heat with the environment according to temperature changes in the environment, a heat storing body (2), and a thermoelectric conversion unit (3) and thermal resistance body (6) arranged between the heat conducting body and the heat storing body. One end (6a) of the thermal resistance body and one end (3a) of the thermoelectric conversion unit are in contact with each other, the other end (6b) of the thermal resistance body is in contact with the heat conducting body and the other end (3b) of the thermoelectric conversion unit is in contact with the heat storing body (2), and the surface of the heat storing body (2) is covered by a covering layer (4) having a certain heat insulation properties. The thermal resistance of the thermal resistor is determined based on a thermal time constant, the thermal time constant being defined as a numerical value which is calculated by multiplying the thermal capacity of the thermal accumulator by the total thermal resistance of a thermal network composed of the thermal conductor. The temperature difference generated between the heat conducting body and the heat storing body is utilized to extract electric energy from the thermoelectric conversion unit.

IPC 8 full level
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EP 2800157 A1 20141105; EP 2800157 A4 20151007; EP 2800157 B1 20200819; AU 2012361686 A1 20140717; AU 2012361686 B2 20160121; CN 104025327 A 20140903; CN 104025327 B 20170222; CN 106340583 A 20170118; CN 106340583 B 20181030; EP 3093895 A1 20161116; EP 3093895 B1 20170913; JP 2014053635 A 20140320; JP 5436727 B2 20140305; JP 5619256 B2 20141105; JP WO2013099943 A1 20150511; KR 101719482 B1 20170324; KR 101759124 B1 20170718; KR 20140114347 A 20140926; KR 20160095200 A 20160810; US 10644215 B2 20200505; US 11316090 B2 20220426; US 2014338713 A1 20141120; US 2020235274 A1 20200723; WO 2013099321 A1 20130704; WO 2013099943 A1 20130704

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